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Perceptions of managers and Spanish-speaking employees in the Iowa horticultural industry

Emilie Justen
Iowa State University

Perceptions of managers and Spanish-speaking employees in the Iowa horticultural industry

By

Emilie Anita Kristine Justen

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Program of Study Committee:
Cynthia Haynes, Major Professor
Ann Marie VanDerZanden
Nancy Grudens-Schuck
Susan Benner

Iowa State University

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1. GENERAL INTRODUCTION

Introduction

Labor availability affects the decisions agricultural companies make about cropping patterns and the new technologies they adapt (Boucher et al., 2007). Labor availability can also affect competition between domestic producers and low-cost international producers (Boucher et al., 2007). Seasonal positions, low wages, and a decreasing supply of domestic labor willing to perform farm work contribute to a current labor shortage in the agricultural industry. All these factors have led managers to recently recruit foreign-born workers (Bitsch, 2004; Boucher et al., 2007; Waliczek et al., 2002).

Changes in the composition of the U.S. population were documented in the 2000 census and showed an increase of people identifying themselves as Latino (Marotta and Garcia, 2003). A survey conducted by the U.S. Department of Labor (2005) showed that 75% of hired farm labor was born in Mexico, 23% born in the U.S., 2% born in Central American countries, and 1% born in other countries. A study by Boucher et al. (2007) found that villages in Mexico are the primary source of labor to U.S. farms. The researchers also found that where migrants locate and what jobs they work in depend on networks of existing contacts (Boucher et al., 2007).

These labor statistics are important for people working in horticultural firms, as well as for people who work in education and outreach services. In fact, 20% of all farm crop workers reported that they had taken at least one adult education class in the United States (United States Department of Labor, 2005). Effective delivery of educational materials to Latinos requires knowledge of the educational topics Latinos are interested in learning and

the best methods of delivery to interested learners. Managers who hire Latino workers recognize that language, cultural, and educational barriers can hamper productivity, efficiency, and safety. Therefore, developing educational materials for the workplace can help horticultural firms alleviate such workplace barriers (Martinez-Espinoza et al., 2003).

Needs assessments can provide information to help improve working relationships between managers and employees. The results of a needs assessment of horticultural employers in Michigan were used to develop an educational program targeting the needs of horticultural managers (Bitsch, 2004). The educational program for managers covered topics such as people-oriented management, developing practices for training and development, workforce trends, dealing with cultural differences, using feedback to develop motivation and trust, and providing a frame of expectations and procedures for rewarding superior work performance (Bitsch, 2004).

Previous research exploring the interest of Latino participants in educational materials showed they were interested in a variety of subjects. Farner et al. (2005) reported that participants were interested in classes for English, computers, finance, and nutrition. The researchers also found that structured classes aided by hands-on activities were the most appropriate delivery methods for Latino participants (Farner et al., 2005). A bilingual staff conducted the study to discover what information Latinos wanted to receive from organizations and what was an appropriate design for educational sessions (Farner et al., 2005). Results of the study suggested that agency cooperation with established institutions that have a positive relationship with the Latino community may improve Latino participation (Farner et al., 2005).

A previous study in horticulture explored the interest of Latino employees in work-related training materials. Mathers (2003) reported that Latino employees enjoyed receiving information, such as company newsletters, in Spanish. Latino participants also indicated that they wanted to see more educational programs in Spanish about horticultural topics (Mathers, 2003).

Some resources are available to employers and employees working in the horticultural industry. The Occupational Safety and Health Administration (OSHA) provides publications in Spanish, including cards, fact sheets, news releases, posters, and safety and health information bulletins. Books, CDs, and videos that help people learn horticultural terms in Spanish and English are available from university or cooperative extension services. However, these materials require access to the internet and a credit card, and may not be easily accessible for Latino workers.

This study examined the familiarity of university extension programs of managers of Latino workers and Latino workers in the horticultural industry. This study also gathered recommendations from focus group participants for future educational programming.

Thesis Organization

Chapter 2 of this thesis is a literature review that discusses previous research findings on the horticulture workforce, needs assessment, focus group methodology and its use in Extension, and adapting research methods for Spanish-speaking audiences. Chapter 3 is a manuscript accepted by *HortTechnology* which discusses research conducted between fall 2007 and spring 2008. Chapter 4 is a manuscript submitted to *HortTechnology* which

discusses further research conducted between February 2008 and September 2008. Chapter 5 discusses conclusions and implications of the research followed by an appendix.

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CHAPTER 2. LITERATURE REVIEW

Horticultural Workforce

The horticultural industry has seen tremendous growth in recent years. Nationwide, the "Green Industry" produced a total of $147.9 billion in output or sales, 1.9 million jobs, and $95.1 billion in added-value impacts (Hall et al., 2006). Yet, the growth of the Green Industry has lead to concerns about recruitment and retention of skilled workers to meet employment needs (Waliczek et al., 2002). While the industry has grown, wages remain low (Waliczek et al., 2002). Many positions in the Green Industry are seasonal, adding to the difficulty of recruiting and retaining workers (Bitsch, 2004). Often, domestic workers are unwilling to perform farm work, and this decreasing supply of local labor has lead to managers hiring Spanish-speaking workers (Bitsch, 2004; Boucher et al., 2007; Levine, 2008; Waliczek et al., 2002).

Many of these Spanish-speaking workers are migrant workers with an immigration background (Bitsch, 2004; Boucher et al., 2007). For these Spanish-speaking workers, English is their second language and therefore, many are not fluent in English (Bitsch, 2004; Boucher et al., 2007). According to a survey conducted by the U.S. Department of Labor (2005), 81% of the hired farm workers surveyed reported Spanish as their native language, with 44% of those reporting they could not speak English at all and 53% could not read English. Because of the language barrier, employers of Spanish-speaking workers may require help in the form of educational materials such as DVD's, translated written training manuals, or workshops and seminars in Spanish.

Needs Assessment

To help employers of Spanish-speakers, universities, cooperative extension, and industry associations need to determine what challenges exist when hiring workers who are not fluent in English. Conducting needs assessments of both employers and Spanish-speaking workers can help educators develop programs to aid both groups. In the context of needs assessment, "needs" are defined as a difference, gap, or deficiency of an individual's current knowledge and specified norm; it is the gap or discrepancy that the learner is trying to change (Freire, 1974; Pearce, 1998; Witkin and Altschuld, 1995). Needs assessments can help the program planner or educator prioritize decisions about the program and avoid failure (Quigley, 1998; Witkin and Altschuld, 1995). Programs are not and should not be "one size fits all" (Quigley, 1998).

Needs assessments can open dialog between groups of people who may speak different languages and have different cultural backgrounds (Freire, 1974). For example, successful needs assessment can have positive implications for increasing participation in educational programs. Many adult learners may want to utilize educational programs, but can be limited by certain barriers. These barriers can include low self esteem, scheduling, and with Spanish-speaking immigrants, language. Developing programs and creating educational opportunities can help remove those barriers (Caffarella, 2002; Cross, 1981).

Assessment techniques include written surveys, online surveys, personal interviews, and focus groups. Written surveys in the form of questionnaires are the most commonly used means of gathering data for needs assessment (Fowler, 2002; Witkin and Altschuld, 1995). Questionnaires are most effective when they ask respondents for opinions based on experience, background, or facts about which they have direct knowledge (Witkin and

Altschuld, 1995). Online surveys can be divided into email and internet surveys. There are advantages and disadvantages to both. Email surveys are economical, fast to create, convenient, and simple. However, they are limited by the access to sampling lists, technical limitations, limited question types, and lack of anonymity (Sue and Ritter, 2007). Internet surveys have the advantages of low expense, added content options, expanded question types, ability to ask sensitive questions, and preservation of anonymity; however, internet surveys reach a limited population, have a higher rate of incomplete surveys, and depend on software (Sue and Ritter, 2007).

Personal interviews are another method of needs assessment. The open-ended format works well for exploring issues in depth. However, personal interviews can be time consuming and result in a smaller sample size than written or online surveys.

Whether the researcher uses surveys, interviews, or focus groups, the research should be conducted in a process to ensure validity. To help increase validity with all types of assessment, the researcher must avoid the bias of non-inclusion and make use of pilot studies to test survey questions and formats (Witkin and Altschuld, 1995). Validity of a study can also be ensured by using the same questions across all survey participants or groups. Summarizing the participant responses for participant verification also increases the validity of the study. During data analysis, validity can be achieved through coding the data by attaching numbers or labels to emerging themes.

Combining more than one research method can reach a broader audience. Ricard et al. (2008) sought information from arboricultural employers using written surveys. The research team then used responses from the written surveys to conduct face-to-face interviews with non-English speaking employees. In Oregon and Ohio, both written surveys

and personal interviews were used with Latino workers in horticulture to determine training and resource needs (Mathers, 2003).

Focus Group Methodology

Because many Spanish-speaking workers are not fluent in English, serving and delivering assistance to such clientele is often difficult for institutions such as university extension programs. Latino immigrants are among the least formally educated minority groups, and they generally have a rigorous work schedule, not allowing much time to continue their education (Farner et al., 2005). The U.S. Department of Labor (2005) reported that the average highest completed grade for Latino farm workers was 7th grade; this can be compared with 56% of U.S. born farm workers who completed 12th grade while only 6% of foreign born workers had completed 12th grade.

Written questionnaires have been used to collect data from Spanish-speaking horticulture employees. One study found that Latino employees were interested in educational programs in Spanish (Mathers, 2003). Participants also indicated that they lacked technical information in Spanish. Low response rates for the mailed surveys (21% for Oregon and 9% for Ohio) highlight the drawback to using written questionnaires for a demographic with low reading and writing proficiencies.

Focus groups have been shown to be effective in reaching people with literacy problems (Morgan and Krueger, 1993; Skaff et al., 2002; Stewart and Shamdasani, 1990). Focus groups can be useful when working with categories of people who historically have had limited power and influence or who may be overlooked because focus groups allow for a nonthreatening and permissive environment (Morgan and Krueger, 1993).

While focus groups offer insights into complex behaviors and motivations, they must be conducted properly. It is important that the moderator or the group itself does not distort the data produced (Morgan, 1997). Poor planning resulting in methodological and procedural mistakes can also decrease the credibility and validity of the study (Greenbaum, 1998). The highly subjective nature of focus group study can lead to errors in the interpretation of focus group results as well as other analytical mistakes (Greenbaum, 1998).

Miles and Huberman (1994) outline several features of qualitative data, such as found with focus groups. Qualitative samples generally have small samples of people and are purposive rather than random. Random sampling becomes ineffective because the initial or target population is limited, and random sampling can lead to bias. The researcher needs to set boundaries to define what information is being sought. These boundaries include the types of questions being asked, which comments are probed, and what questions will not be asked. It is also important to create a frame to help the researcher uncover, confirm, or qualify the basic processes that strengthen the study. Conducting more than one focus group strengthens the validity of the study and results, and multiple case studies effectively follow a replication strategy.

Analyzing qualitative data from focus groups is done by coding, or recognizing themes. Field notes should be typed, which often stimulates the researcher to remember things that may have been omitted during note-taking (Miles and Huberman, 1994). Coding is used to retrieve and organize categories by assigning meaning to the raw data (Miles and Huberman, 1994; Strauss, 1987).

Using Focus Groups in Extension

In the field of extension education, focus groups have been used for horticultural managers to learn about personnel management issues (Bitsch, 2004). By addressing the needs of the managers, the focus groups allowed the researchers to gather information from the participants that could be used to develop a research program on personnel management practices in horticulture (Bitsch, 2004). Outside of horticulture, focus groups have been used in extension to evaluate educational materials about animal agriculture (Farner et al, 2005; Malek, 2002; Nordstrom et al., 2000; Ortiz and Plunkett, 2003).

Focus groups also have been used in extension with Spanish-speaking community members and employees in the dairy industry. Focus groups helped University of Wisconsin Extension agents unite local Spanish-speakers, companies, and community agencies to determine how agencies could assist Latino families in all aspects of their lives (Malek, 2002). The same study showed that employers were supportive of focus groups involving their Spanish-speaking employees and that they were effective at obtaining information from Latino populations. In Illinois, focus groups were conducted with Spanish-speakers as a university extension needs assessment to learn what information Spanish-speakers sought and how to deliver information to them (Farner at el., 2005). Reaching and connecting with underrepresented groups, such as Spanish-speaking workers, presents a unique opportunity for university extension programming.

Adapting Research Methods for Spanish-Speaking Audiences

The implications of ethnic diversity should be a consideration when conducting focus groups with Spanish-speaking populations. Ethnicity generally can be defined as “a

grouping of individuals based on shared geographic, national, or cultural heritage" (Skaff et al., 2002). According to Skaff et al. (2002), "many ethnic groups in this country are overrepresented in the lower economic strata, a situation that by itself often results in discrimination and prejudice." Social science research methods, such as focus groups, can be useful for diverse populations; however, adaptations to those methods should be considered as needed. Skaff et al. (2002) suggest that "using the European-American form of ethnocentricity…may set up inappropriate assumptions that affect all aspects of research, including recruitment, constructs, and the instruments to measure them, language, and interpretation of data." Researchers working with diverse populations should be trained in cultural sensitivity. For example, power differences exist based on class and education between the research team and the participants, and this "uneven distribution of power can affect the appropriateness of measures as well as the expectations that are carried into the field" (Skaff et al., 2002). The following list describes important to the Latino culture that may influence the research process (adapted from Skaff et al., 2002):

- *Simpatía* – the need for pleasant and smooth social relations
- *Allocentrism* – personal interdependence
- *Familism* – strong identity with and attachment to family
- *Respeto* – respect toward those in power
- *Controlarse* – expectations of self-control
- *Machismo* and *marianismo* – sex roles

Keeping these values in mind, researchers can tailor a research project with Latino populations that will be more appropriate for the culture. For example, including bilingual and bicultural staff helps build interpersonal trust (Skaff et al., 2002). Researchers who share

their own experiences with Latino participants may find more success in eliciting information because Latino participants may respond more when they have a connection with a person (Skaff et al., 2002). As an example, Skaff et al. (2002) discovered that Latino participants in her study avoided talking about negative feelings, and the researchers believed talking about negative feelings violated Latin American culture.

While adaptation of research methods is appropriate and effective, it is also important to avoid stereotyping people based on culture and to recognize that the researchers are working with individuals. Researchers need to be cognizant of one's own biases and to be aware of the diversity within a group to conduct a non-threatening and non-biased study while gathering high-quality data. Researchers also need to be aware that participants from minority groups often are overrepresented in the lower economic strata, which can also lead to discrimination and prejudice (Skaff et al., 2002). Adaptations to traditional research methods can help researchers recruit participants who may have been overlooked in previous studies (Skaff et al., 2002).

A concern with working with Latino participants is the degree of illiteracy (Marín and Marín, 1991; Skaff et al., 2002; Umaña-Taylor and Bámaca, 2004). To help researchers overcome potential literacy problems, Marín and Marín (1991) suggest using third-grade-level English, utilizing words that have Latin roots that are easier to translate into Spanish, avoid using metaphors and colloquialisms, using specific rather than general terms, and utilizing the active rather than the passive voice. Additionally, conducting a pilot study with a sample population can help researchers refine questions and strategies for recruitment.

Ultimately, conducting a needs assessment with both managers and employees may lead to improved communication and higher work productivity. With the growing Latino

population filling horticultural positions, a needs assessment of English-speaking managers and Spanish-speaking workers helps educators address areas for program development. In the state of Iowa, research of the Spanish-speaking horticultural workforce has not been conducted, making our research unique. The objectives of this research were (1) to explore experiences of managers of Latino workers; (2) to explore experiences of Spanish-speaking employees to determine communication challenges in the workplace; and (3) to determine what programs or tools can be developed to aid communication between managers and workers.

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CHAPTER 3. MANAGERS OF LATINO WORKERS IN THE IOWA HORTICULTURE INDUSTRY WANT EDUCATION TO BRIDGE LANGUAGE AND CULTURAL BARRIERS

A paper accepted by *HortTechnology*

Emilie A.K. Justen, Cynthia Haynes, Ann Marie VanDerZanden, Nancy Grudens-Schuck

Abstract

Horticulture is the fastest-growing sector of the agricultural industry, and this is true particularly in Iowa where the number of private horticultural businesses has more than doubled since 1993. The industry is relying more on non-English speaking employees, especially Spanish-speaking workers, for golf course maintenance, landscape installation, and nursery production. Determining and serving the educational and training needs of a workforce that is not fluent in English is historically difficult for university extension programs. This study assessed educational needs and technical issues of English-speaking managers of primarily Spanish-speaking workers in the horticultural industry in Iowa, with special attention to language and cultural issues. Four focus groups were conducted with managers recruited in cooperation with state professional horticultural associations. Communication gaps and challenges interpreting cultural differences were cited as key difficulties experienced by managers of Latino workers. The study produced a list of ideas for educational initiatives that would improve lateral (two-way) communications and delivery of Iowa-specific horticultural education and job-site training between English-speaking managers and Latino employees.

Introduction

The ornamental horticulture industry has seen tremendous growth nationwide in recent years (Hall et al., 2005; Shields and Willits, 2003). The United States Department of Agriculture (USDA) reported that in 2006 total sales of nursery crops increased 17% from 2003, while the number of smaller producers decreased and the number of producers with sales over $100,000 increased (USDA, 2007). The increased demand for horticulture products and services has led to growth in landscape goods, wholesale and retail trade operations, and the landscape service industry, which in turn has created jobs in agriculture (Shields and Willits, 2003).

Horticulture commerce is composed of nursery, greenhouse, fruit and vegetable production, and service sectors such as landscape design, installation and maintenance, lawn care, and tree care. Nationally, the production, horticultural services, and wholesale and retail trade products sectors of the horticulture industry contributed $147.1 billion in total sales receipts in 2002 (Hall et al., 2005). The United States Department of Agriculture reported that in 42 states, nursery and greenhouse crops rank in the top 10 commodities and rank as the fourth-largest crop group in the United States in terms of farm cash receipts (Jerardo, 2005). Horticulture is the fastest-growing segment of the agriculture industry in Iowa, and the number of private horticultural businesses in Iowa has more than doubled in the past 13 years (Haynes et al., 2007; Klein, 2003).

Iowa has experienced change not only in the importance of the horticultural industry to its farming profile, but a change in the profile of the agricultural employment pool. Within the last decade, Iowa has experienced an influx of employees able and willing to work in the horticulture and other industries, who have arrived in the state from Latin America (Norman,

2008). Seasonal positions that begin in March or April and end before December are common in the horticultural industry, and it is common for Latinos to hold these jobs (Lacey et al., 2007; Waliczek et al., 2002). Word of mouth, referrals, and family contacts are recognized as effective recruitment techniques for seasonal, manual-labor positions filled by Latino workers (Waliczek et al., 2002). Because the majority of seasonal workers are not fluent in English, communication is an ongoing challenge for managers who are not fluent in Spanish (Bitsch and Harsh, 2004). Language, cultural, and educational barriers hinder productivity, efficiency, and safety in the horticultural industry (Martinez-Espinoza et al., 2003). Both managers and workers experience improved working conditions and are more productive when the technical, language, and cultural educational needs of groups new to each other are fully addressed (Quigley, 1998).

Using focus groups to assess needs

Needs assessment for adult employee education requires a long term commitment and a multifaceted approach (Caffarella, 2002; Morgan and Krueger, 1993). Focus groups provide a way to collect a wide array of ideas about needs, and are considered a sound methodology with which to begin a needs assessment process. The focus group method can succeed in eliciting participation from all attendees in the conversational style (Morgan, 1997). Focus groups also permit respondents to provide data about strong feelings related to educational needs and cultural differences—both negative and positive. Such information is crucial to designing mutually-satisfying and effective educational programming (Pearce, 1998; Quigley, 1998). Bitsch and Harsh (2004) used focus groups with English-speaking managers of greenhouses, nurseries, and landscape contractors in Michigan to identify risk factors in labor management of Latino workers. This study found that managers supported

and encouraged Latino employees to learn English and supervisors to learn Spanish. The managers from the study also commented on traditional Latino values of strong sense of community, close family attachment, and caring for one another. However, these values can lead to workplace challenges when Latino employees unexpectedly leave the job because of family requirements (Bitsch and Harsh, 2004).

Morgan (1998) describes focus groups, or group interviews, as "a way of listening to people and learning from them," which opens lines of communication between the researcher and participant, and participants with each other. Focus groups allow participants to think more deeply about their responses because they listen to the responses of other participants. Focus groups give participants a chance to "share and compare" experiences in a way that provides high quality data for the researcher regarding competing needs or compatible approaches (Morgan, 1998). Focus groups may be used as a principal source of data or, more commonly in needs assessment, as a complement to studies that employ other sources for data such as written sample surveys or individual interviews (Morgan, 1997). Haynes and Trexler (2003) used focus groups as the primary data collection method to assess training needs of volunteers at a public garden. Jutila et al. (2005) used focus groups and a written survey instrument for their research with volunteers at a public garden. In the field of horticulture, focus groups have been used as a research method to understand the perspectives from landscape professionals, public garden volunteers, and growers in the commercial greenhouse industry (Barton et al., 1996; Haynes and Trexler, 2003; Jutila et al., 2005; Scoggins et al., 2004).

Little information is available about the English-speaking managers of the Latino workforce in the horticultural industry in Iowa. The objective of this study was to determine

the educational and training needs of managers of Spanish-speaking horticultural workers in Iowa.

Materials and Methods

Approval and planning

Approval to conduct research involving human participants was obtained in June 2007 from the Institutional Review Board (IRB) of Iowa State University. The question guide was developed and revised using a panel of experts consisting of focus group methodologists and individuals familiar with the Latino communities in Iowa and elsewhere. Moderators were trained using guidelines outlined per Krueger (1998a). A pilot study was conducted with seven participants to ensure preliminary questions produced relevant data, and to determine effective recruiting strategies for future focus groups.

Recruitment

Four focus groups with a volunteer, self-selected sample were conducted in Iowa between Sept. 2007 and Mar. 2008. The target population was English-speaking managers of Latino workers from the golf-course, nursery production, and landscaping sectors of the Iowa horticulture industry. In July 2007, 241 letters requested participation of managers who hired and managed Latino workers. The letters were sent to all active members of the Iowa Nursery and Landscape Association (INLA) and Iowa Turfgrass Institute (ITI). Two hundred twenty-three reminder postcards were mailed 2 weeks later. Respondents to the letters and/or postcards who were interested in participating and who fit the target population were contacted in Aug. 2007 by phone or email to schedule a date and time for a focus group. A

second phone call or email was made providing the date, time, and location of the focus group.

In Jan. 2008, additional participants were recruited during the INLA Annual Convention and Trade Show and the 74th Annual ITI Conference and Trade Show. To recruit participants from the INLA and ITI annual conferences, the organizers of the conferences were contacted, and permission to recruit was obtained. Flyers were distributed, and announcements were made about the study at both conferences to reach potential participants from the target audience.

Data collection

The first focus group after the pilot study was conducted in Ames, IA on 7 Sept. 2007 with four managers from landscaping and golf-course firms/companies. The second focus group was conducted in Des Moines, IA on 25 Jan. 2008 with six managers from landscaping and nursery firms/companies during the INLA conference. The third focus group was conducted in Charles City, IA on 15 Feb. 2008 with 10 managers from a single nursery-production company. The fourth focus group was conducted in Des Moines, IA on 26 Feb. 2008 with five golf-course superintendents and assistant superintendents from the golf-course industry. The four focus groups were intended as replications to produce high-quality qualitative data across sites and to account for differential group dynamics (Morgan, 1997).

Twenty-five participants from the four focus groups represented three sectors of the horticultural industry: golf-course maintenance (n = 7), landscape design and installation (n = 6), and nursery production (n = 12). Each focus group had four to 10 participants. Two researchers were present at each focus group, a moderator and an assistant moderator. At the beginning of each focus group, the moderator read directly from a script outlining the rules

and procedures for the discussion. Each participant was asked to read and sign an informed consent form that stated the risks and benefits of participation in the focus group.

An opening introductory question was used to help all participants become familiar with one another. Participants were asked open-ended questions from the IRB-approved list. Discussion questions, created by the authors (Table 1), were designed to determine training and resource needs of managers, and to understand how university extension programming can help managers improve working relationships, including communications, with their Spanish-speaking employees. Questions were sequenced from general to specific to maximize insight, which allowed the participants to become more familiar with the topic. Probing, or follow-up, questions were asked by the moderator during the discussions to clarify comments that may have been unclear.

Focus-group discussions lasted 60 to 90 min. The moderator led and facilitated the discussion questions and the assistant moderator documented comments from the participants in the form of field notes. Responses also were captured with digital and tape recorders. Participants were informed of the recording, and their identities were kept confidential by using their initials during transcription. At the conclusion of each focus group, the assistant moderator summarized the comments, and participants were asked to verify the accuracy of the summary.

Data analysis

The researchers discussed the responses of the participants in a debriefing immediately following the focus group session which began the process of identifying and modifying the question guide. The digital and tape recordings were transcribed. Transcriptions were coded by attaching labels to ideas or themes that emerged from the

discussions. The long-table approach was used for coding and analyzing the focus group transcriptions (Krueger, 1998b). This method required printing the transcriptions on paper of different colors for each focus group. Transcriptions were cut and organized under emerging themes across the four focus groups. Presentation of findings was organized by background and demographics, communication with Latino workers, observations of culture, and future programming.

Results

Background and demographics

Participants discussed their backgrounds in relation to their current horticultural positions. Of the 25 participants, 21 were male and 4 were female. Discussions revealed that 80% of participants had farming backgrounds and were raised in rural communities. The majority of participants, 72%, were below the age of 50 years. When asked what their aspirations for the future were, 48% of the participants were content in their current positions; however, 32% of the participants also were looking forward to retirement. Job responsibilities of the participants included day-to-day operations of golf courses, managing staff, overseeing landscape installations, budgeting, and hiring/training new staff. Participants enjoyed working outdoors, the variety of job tasks, growing plants, and designing landscapes. Challenges for the participants included criticism from golf-course members and clients, long hours during the growing season, and the physically demanding nature of many of the tasks.

Managing employees for many participants was both a challenge and an enjoyment. Managers felt challenged, for example, when some employees were not present for work and

had not notified the supervisor. Managers also said they were displeased when employees appeared to show limited creativity during landscape installation. However, participants also stated that they enjoyed working with employees and many reported that they had developed a bond—indicating a positive relationship—with their Latino employees. For one participant, Jane, this bond went beyond working hours to being "invited to all the weddings and the baptisms and everything. [They were] really, really kind and generous…and shared a lot of food."

Communication with Latino workers

Participants reported communication challenges when supervising Latino employees. When asked to state their level of Spanish language fluency on a scale of 1 to 5 (1 = poor/limited, 5 = excellent/fluent), 79.2% of 24 respondents rated their fluency as either 1 or 2 (54.2% and 25%, respectively). Participants reported using workplace-Spanish handbooks, dictionaries, translation websites, and bilingual employees to translate instructions from English to Spanish. Although participants were aware of Spanish-language classes available through community colleges, only three participants had inquired about the classes and none had enrolled.

Managers also talked about the ways in which they stayed current in technologies in the industry. Many relied on coworkers, on-the-job training, and trade magazines for new information about management practices, including how to successfully work with employees. Golf-course superintendent participants stated they often shared information at meetings about management practices with one another. Participants reported providing safety trainings to Latino workers; however, few participants, 36%, provided posters, videos, or technical literature in Spanish to Latino employees.

Four managers recommended a class on Spanish language for horticulture undergraduate students at Iowa State University. An Iowa State University alumnus from 2000 summarized the sentiment with the comment: "There was never any focus on taking Spanish at the college level. A little golf-course fluency, that's all [the students] need, and then [the students] can go from there." Five participants discussed and recommended classes on Latin American culture and human resource management for horticulture students at Iowa State University.

Observations of culture

Most of the participants emphasized the need for cross-cultural training for both managers and employees. Managers said Latino employees placed great importance on family relationships. Also, nearly all participants agreed that Latino employees were hard-working and dependable. Eight participants remarked that Latino employees often had second jobs in the evenings and that many relied on younger children in the family to complete English-language forms and translate oral and written communications for their Spanish-speaking parents. Three participants expressed concerns that Latino employees had difficulty finding addresses when working on landscaping jobs. Nearly half of participants across focus groups stated that Latino employees feared reporting equipment failure. Managers described societal characteristics of Latino employees in which those in positions of authority are respected and not to be questioned. This differed from the organizational culture of the United States in which lateral communications and "equality" norms were more typical, such as in the horticultural industry. Tony and Roy illustrated these societal characteristics with their comments:

Tony: “For [Americans], we like to think that we’re equal. But for [Latinos], they usually have one dominant person. That’s just the way their culture is.”

Roy: “When we [managers] talk to each other, we look in each other’s eyes. [Latinos] don’t. In their culture, they don’t look in our eyes. That’s for managers.”

Participants asserted that learning a few common Spanish phrases had helped to establish respect and remove cultural barriers with Latino employees. One participant used pictures instead of words to label and organize tools. To connect with employees and overcome cultural barriers, one supervisor used the following analogy to relate the importance of golf in the United States with soccer in Latin America to his Latino workers. “The little trick I use, the common denominator between everybody [who] speaks Spanish, is soccer. That’s something that I take and I relate it to the golf industry. [Latinos are] so passionate about soccer; in the United States we’re passionate about golf, especially at this place. For what it’s worth, it seems to keep everybody on the same page, if we talk about soccer once in awhile.”

Future programming

When participants were asked if they were aware of university extension services and programs, most stated that they were familiar with programs such as Master Gardeners, 4-H, and plant pest management bulletins. The question also stimulated criticism. One participant remarked that Iowa State University extension did not sufficiently promote their services because he was unaware of publications, classes, or the location of the county extension office. Participants said they were not aware of any university extension programs specially geared toward managers of Latino employees or extension programs or materials available in Spanish.

Focus-group participants suggested a range of specific program topics that they believed were needed by Latino employees to be more successful workers in the horticultural industry (Table 2). Participants suggested developing educational materials for safe equipment operation, proper use of fertilizers and pesticides, and ways to identify harmful insect pests and common plants dangerous to workers, such as poison ivy [*Toxicodendron radicans* (L.) Kuntze]. All golf-course superintendents agreed that explanations about golf, how it is played, why things are maintained or managed a certain way on the golf course, and golf etiquette were also needed, so that employees would know why particular standards of care and quality were needed. Participants also made suggestions for delivery methods of educational materials that included visual aids, Digital Video Discs (DVD), and a workshop leader who spoke Spanish. To work even more successfully with Latino employees in the landscaping industry, participants suggested that INLA offer educational opportunities for Latino employees in the form of seminars or workshops during winter months.

Slightly more than half of participants across all focus groups agreed that access to extension materials should be more straightforward. Moreover, to better connect university extension research with private industry, participants suggested creating links from extension websites to associations such as ITI and INLA. Participants also suggested that extension educators could provide information in trade magazines about cultural differences between communities in Latin America and those in the United States. Participants also endorsed the creation of general labor management classes, provision of publications about nursery and golf course technical features in Spanish, and workshops about cultural differences.

Discussion

Focus groups are especially useful for illuminating complexities on sensitive topics, such as manager-employee relationships and for topics that are poorly understood (Morgan, 1998). The complexities of the new Latino presence in the Iowa agricultural industry, including horticulture, qualify as both a sensitive and poorly-understood topic. The research successfully identified challenges and needs of managers who supervise and work with Latino employees. The data provided a well-rounded portrait of admiration and satisfaction, as well as frustrations and limitations possessed by managers who rely on Spanish-speaking employees on a daily basis. The findings point to opportunities and strategies that would make the workplace and the industry stronger and more satisfying for the cultural and language groups currently dominant in the industry.

Focus group methodology has limitations, however, and the results from this study should not be extrapolated beyond the sample. The ethnic diversity of the state of Iowa is not comparable to states with larger Latino populations, therefore the results conducted from studies in other states may vary. Furthermore, our study did not address issues from the perspective of the workers. To strengthen and add depth to the research, a needs assessment of Latino horticultural workers would be beneficial.

Our focus-group discussions showed that managers observe and indentify language and cultural differences that both enhance and conflict with job performance of employees. These findings are similar to findings of Bitsch and Harsh (2004) in Michigan. The findings showed that the language barrier between English-speaking managers and Latino employees poses daily challenges for the managers (Bitsch and Harsh, 2004). Recognizing and learning

about these differences could help managers of Latino workers in Iowa build better work relationships with their employees.

Focus-group discussions suggested that managers would benefit from learning and using Spanish vocabulary specific to golf courses, production nursery, and landscape installation. These findings are similar to a survey of arborists who hire Latino workers in Connecticut (Ricard et al., 2008). The study showed that managers were interested in workshops, videos, training materials written in Spanish, and a manual with a list of common words used in the industry in English and Spanish for their Latino employees (Ricard et al., 2008).

Focus-group discussions suggested that universities, industry associations, or cooperative extension may want to consider developing programs addressing language and cultural differences (Table 2). University extension programs and services could use this information to develop publications or workshops tailored to managers of Latino workers. Providing bilingual educational materials to managers at trainings and workshops sponsored by cooperative extension and industry associations would help managers improve communication with their employees. Universities, industry associations, and cooperative extension also may want to consider collecting resources, such as horticulture words in Spanish or training manuals in Spanish, and making them easily accessible through the Internet. Using pictures instead of words to address safety concerns could reduce on-the-job accidents. In addition, existing publications could be translated to Spanish for distribution among Latino workers. These suggestions would help managers make connections with their Latino employees, regardless if the managers speak Spanish or not.

If implemented, the suggestions of focus-group participants for future programming could help improve communication and cultural understanding between managers and Latino employees. Past research involving the horticulture workforce supports the need for educational programming for horticultural industry workers (Haynes et al., 2007; Mathers, 2003; Scoggins et al., 2004).

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Table 1. Question guide used by facilitator during focus groups of managers of Latino workers in Iowa to determine resource needs of managers.

Opening
How did you become involved in horticulture?
What is your agriculture history of background?
What dreams or aspirations do you have for the future?
Demographics
What position do you hold in your company?
What are your duties in this position?
What do you enjoy about this position?
What do you dislike about this position?
How much Spanish do you speak?
Training and resource needs
What training and information resources are available to you?
What training and information resources do you provide to your Spanish-speaking employees?
How do you access these resources?
Do you know about the extension service and extension programs?
Concluding
How can extension help make you more successful with Spanish-speaking employees?

Table 2. Recommendations for future educational programming for universities, cooperative extension, and industry associations to assist Latino workers in the horticultural industry. Recommendations originated from focus group participants who were managers of Latino employees in the Iowa horticultural industry.

Universities
• Develop and implement Spanish and Latin American cultural class for undergraduate horticulture degrees
• Encourage participation in human resource management class for undergraduate horticulture majors
Cooperative extension
• Develop publications about Latin American societal characteristics
• Develop publications about proper use of fertilizers and pesticides in Spanish
• Develop publications about ways to identify harmful insect pests and harmful plants in Spanish
• Work with industry associations to create bilingual safety trainings, manuals, and guides with pictures
• Provide bilingual educational materials to managers at workshops and trainings
• Translate existing publications from English to Spanish
• Deliver trainings for Latinos through visual aids, DVD, and workshop leader who speaks Spanish
Industry associations
• Offer seminars and workshops for Latino employees during winter months

- Develop publications about golf, how it is played, and golf etiquette in Spanish
- Develop publications about nursery production and landscaping in Spanish
- Create links from industry associations to extension websites
- Offer general labor management seminars and workshops about cultural differences during annual conferences

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CHAPTER 4. INSIGHTS FROM SPANISH-SPEAKING EMPLOYEES IN THE IOWA HORTICULTURAL INDUSTRY

A paper submitted to *HortTechnology*

Emilie A.K. Justen, Cynthia Haynes, Ann Marie VanDerZanden, Nancy Grudens-Schuck, Susan Benner

Abstract

Labor intensive tasks, seasonal positions, low wages, and a decreasing supply of domestic labor have contributed to Iowa horticultural firms hiring foreign-born workers. The majority of these workers are Spanish-speaking Latinos who arrived to the United States from Mexico and other parts of Latin America. Addressing the educational and other employment needs of Latino horticultural workers was anticipated to improve working conditions, job satisfaction, and productivity of both employees and the companies that hired Latino workers. This study assessed educational needs, communication gaps, and technical skills of Latino workers already working in the horticultural industry in Iowa. Three focus groups were conducted with Latino workers recruited in cooperation with English-speaking managers. Communication (language and cultural) gaps and lack of Iowa-specific horticultural knowledge were cited as key job challenges experienced by Latino workers. The study produced a list of topics for educational programming that could improve communications and horticultural knowledge between English-speaking managers and Latino employees.

Introduction

Horticultural products and services require tasks that are labor intensive. Many factors, including seasonal positions, low wages, and a decreasing supply of domestic labor willing to perform farm work, has led managers across the United States to recruit foreign-born workers (Bitsch, 2004; Boucher et al., 2007; Waliczek et al., 2002). A survey conducted by the United States Department of Labor (2005) showed that 75% of hired farm labor was born in Mexico. A 2007 study by Boucher et al. confirmed this statistic and found that rural villages in Mexico are the primary source of labor to U.S. farms.

The domestic labor shortage in agriculture is evident in the state of Iowa, which has experienced an influx of employees who have arrived from Latin America (Norman, 2008). Spanish-speaking, or Latino, workers typically fill seasonal positions in the horticulture industry. Communication is a challenge for employees who are not fluent in English – a situation which characterizes the current employment experience for Latinos and their typically non-Spanish speaking managers and owners (Bitsch and Harsh, 2004; Waliczek et al., 2002). Addressing the needs of both managers and Latino employees could improve the working conditions, job satisfaction, and productivity of both employees and the companies that hire Latino workers (Quigley, 1998).

Focus group methodology was applied to gain knowledge about the perspectives of Latino workers across the horticulture industry in Iowa. Focus groups, a type of group interview, enables researchers to explore the specific and generally less well known needs of individuals (Morgan, 1997). Information gathered from focus groups helps educators design effective educational programming (Pearce, 1998; Quigley, 1998). Within university extension, focus groups have been used with Spanish-speaking community members to learn

about other challenges faced by newcomers to Midwestern states. For example, a focus group study in Wisconsin helped researchers determine how extension, community agencies, and companies hiring Latinos could assist Latino families in school, livelihood, language, and integration issues (Malek, 2002). The study also demonstrated that focus groups functioned well to gain insights from Latino populations (Malek, 2002). Further, focus groups were used in Illinois as part of an extension needs assessment to determine the type of general information sought or desired by Latinos, and generated ideas on ways to disseminate information from university extension and community programs to Latinos (Farner et al., 2005).

Connecting and building common understandings with Spanish-speaking workers presents an opportunity for university extension and community agencies to improve the lives of this employee group. While previous studies have been conducted to examine issues for Latino employees in other states, little information is available about the Spanish-speaking employees in the horticultural industry in Iowa, and employers of Latino workers in Iowa's horticultural industry were supportive of their employees participating in this research. The objective of this study was to determine the educational and training needs of Spanish-speaking horticultural workers in Iowa.

Materials and Methods

Planning and recruitment

Approval from the Institutional Review Board (IRB) of Iowa State University was obtained to conduct research involving human participants in June 2007, and continuing review was obtained in June 2008. Experts in focus group methodology and individuals

familiar with Latino communities developed and revised the question guide which consisted of 14 questions. Moderators were trained using guidelines outlined per Krueger (1998a). A pilot study was conducted to test the questions and to determine effective recruiting strategies for future focus groups.

The target population was Spanish-speaking employees from the golf course, nursery production, and landscaping sectors of the Iowa horticultural industry. English-speaking managers who had successfully participated in an earlier set of focus groups were contacted to assist in recruitment of Spanish-speaking employees. Each focus group was conducted on the work site to avoid transportation problems or conflicts potential participants may have had after work.

Data collection

Three focus groups consisting of volunteer, self-selected participants, and facilitated by two moderators were conducted in Iowa between Feb. 2008 and Sept. 2008. The three focus groups were intended as replications to produce high quality data across sites and to account for differential group dynamics (Morgan, 1997).

Members of the focus groups consisted of Latino employees throughout the state of Iowa. The total of 22 participants from the three focus groups represented three sectors of the horticultural industry: golf-course maintenance (n = 12), landscape design and installation (n = 3), and nursery production (n = 7). A moderator and an assistant moderator, who were fluent in both English and Spanish, were present at each focus group. Focus groups were conducted as reported by Justen et al. (2009) and adapted from Krueger (1998a). Discussion questions were designed to determine training and resource needs of employees, and to understand how university extension programming can help employees to improve working

relationships, including communications with each other, with their English-speaking managers, as well as provide for industry-related technical material.

Focus-group discussions lasted 60 to 90 min. Both digital and tape recorders were used to capture participant responses. Participant identities remained confidential. Reporting of results used only initials, beginning with the transcription. At the conclusion of each focus group, the assistant moderator summarized the comments and participants were asked to verify the accuracy of the summary.

Data analysis

The researchers discussed the responses of the participants in a debriefing immediately following the focus-group session, which began the process of identifying themes per the qualitative nature of focus group methodology. Digital and tape recordings were transcribed in original Spanish. The transcriptions were then translated from Spanish into English. The long-table approach was used for coding and analyzing the focus group transcriptions (Krueger, 1998b). Presentation of findings was organized by demographics and background; communication, training, and resources; and participant recommendations.

Results

Demographics and background

Of the 22 participants, 3 were female and 19 were male. Fifteen of the 22 participants held seasonal positions from March to October or November. Five reported having previous farming experience in their home countries, and had participated in raising corn, black beans, tomatoes, and cattle. Ten participants reported having worked in United States agriculture before holding their current position, with many working in fruit and vegetable fields in

California. Eleven participants reported that they came to their current position by recommendation of a friend or family member. Almost all participants stated that they liked their current job and were content in their positions. Participants spoke about their future goals and the majority stated that they wanted to help their families. Many also indicated that they desired to earn more money, own a house or business, or receive more education, such as taking English classes or courses in a health services-related field. One participant expressed concerns about the environment, and wanted to find ways to "make the Earth better, to make it less [damaged]."

All participants reported being responsible for a wide variety of tasks associated with their jobs. At the wholesale production nursery, participants were in charge of growing and maintaining potliners, containers, and trees. They were responsible for pulling orders, spacing and consolidating containers, pruning, planting, watering, and fixing irrigation pipes. The participants from the golf course were responsible for cutting the greens and reconstructing the damage on the golf course. Plant installation was the primary responsibility of the participants from the landscaping company.

Almost all participants reported enjoying the variety of their tasks. Many also reported that working out-of-doors also allowed them to appreciate the beauty of the plants, flowers, and details of the golf course. They also expressed enjoyment when working as a team and many felt the work tasks were easy rather than burdensome. Many participants compared their current position with previous jobs they disliked, such as working in grocery stores, meat-packing plants, or factories. When comparing a past job with a current position one participant said: "I think it's better to work here than in a factory. [At the factory] they pass the time in one place, doing the same thing. If you go to the restroom, you have to have

someone [take] your place. Or you can't talk; here, we sing, we talk, we laugh, we make jokes. It's hard work but it's good." The participants from the golf course enjoyed using the machinery and cutting the grass. Participants also reported finding satisfaction when a job was successfully completed.

In addition to talking about what they liked about their jobs, participants discussed their frustrations and concerns. Some of their frustrations included other workers whom they believed did not want to work and supervisors who were paid more for doing the same job. Participants also expressed aggravation with co-workers and managers who brought problems from home to work. Participants reported that they did not enjoy working outdoors during rain or cold weather. Another dissatisfaction participants expressed was the need to purchase items from their own funds, such as goggles and gloves for safety protection. Only three participants reported satisfaction with the job pay. Two participants expressed anxiety related to impending job termination at the end of the season because of the uncertainty of returning to the same job the next year.

Participants followed such comments by stating that they recognized that supervisors tried to find ways to help Latino workers improve working conditions. One participant reported that having pictures instead of words to label tools helped the workers keep the tools in order. The participant pointed to a section of the shop: "Look, those help, the photos that are over there. They are helping us a lot because in the past years, we came and put rakes, shovels, everything mixed up. And when we needed something, we had to move everything. Now, everything is ordered and it's much easier, this is helping us a lot."

Communication, training, and resources

Learning and speaking English was a key desire and frustration for almost all participants. Only three participants of 22 reported understanding and speaking English fluently. Not being able to speak English was a frustration because participants were unable to express or explain what they needed or wanted. Inability to speak English made participants feel uncomfortable or "feel like a mute." One participant explained her fear of speaking English while managing crews of English-speaking workers: "When I am in charge of planting, sometimes they send me Americans, and it's my biggest fear that I don't explain well enough to them, or…they don't understand me well, and I have to explain [the work] to them." Outside of the job, almost all participants reported that not knowing English affected their daily lives while shopping and trying to communicate with doctors and teachers. Though participants were aware of the existence of no-cost English classes, some expressed concerns about not having enough time, not having a car to drive to class, or being too tired after working to attend classes.

The majority (95%) of participants stated that horticultural training was provided on-the-job from supervisors or co-workers and felt that they successfully learned the job from experience. Participants reported that supervisors provided information through videos and Digital Video Discs (DVD) in Spanish regarding machinery operation and safety, about care of the greens of the golf course, and safety related to other aspects of the work. The seven participants from nursery production also said they received information from the parent company and have on occasion been sent outside the company for training. Often, however, the responsibility for training new Latino workers fell on the Latino crew leaders, who explained the job to the new workers. Participants were aware of other training and resources

available in the community as well. In addition to free English classes, they were aware of classes that would enable them to become a welder or a health services worker. When asked if they were familiar with university extension programs and services, only one participant had heard of programs, but had not attended any because all programs appeared to be delivered in English.

Participant recommendations

Focus group participants provided many suggestions and recommendations for university extension, community agencies, and horticultural firms to help with their working relationships (Table 1). Participants suggested that agencies such as university extension could work with companies to send employees to classes. Participants were interested in classes about watering, fertilizing, and chemicals. Participants also suggested having classes in Spanish to learn plants and their names, plant selection for specific sites, how to plant them, and how to maintain them. Participants remarked that classes should have more detail than videos or DVDs might provide, allowing for more interaction between participants and educators. To advertise classes being offered, participants suggested posting flyers and bulletins in Spanish at grocery stores that explain the mission of university extension. When offering classes to Spanish-speakers, one participant suggested providing child care to encourage more people to participate. Participants suggested that managers could provide magazines in Spanish about landscaping or other relevant work material to further help their employees. Participants also said that pamphlets in Spanish that explain how to do things would be helpful as well.

To communicate better with their English-speaking supervisors, participants were interested in attending English classes. One participant suggested that having bilingual

teachers might help them learn more English: “I went to a place, and they didn’t speak Spanish. So someone goes to learn English, but many times that person stays the same as if he didn’t go because the teacher can’t communicate with us, he can’t understand. This is the problem, if there could be teachers who speak Spanish and English.” Some participants also felt that supervisors should learn Spanish as well, especially considering the high worker turnover of seasonal positions. One participant explained that when people in a position of authority speak Spanish, a connection can be created: “When we speak English that [the supervisors] understand, they feel good. And when we hear that you [the moderators] speak Spanish, it feels good, that you speak Spanish, that you speak our language, that you like it, because we understand each other.”

Many participants also felt that supervisors should learn how to better manage people and learn how to get along with workers. Participants felt these concerns were related to cultural differences and expressed that if supervisors could learn about Latin American culture and customs, working relationships could be improved. One participant felt that if managers treated employees more like family, “the workers [would] have more desire [to work]. Everything depends on the relationship that you make between the owner and the workers.” By doing so, the relationship between the worker and the supervisor could become more open and with the respect given to the workers by the supervisors, the workers might have higher job performances.

Discussion

The research successfully identified challenges and needs of Latino employees in the Iowa horticultural industry. The data provided a comprehensive portrayal of satisfaction,

frustrations, aspirations, and limitations possessed by Latino workers. The findings point to opportunities and strategies that would make the workplace and the industry stronger and more satisfying for the cultural and language groups who currently are dominant in the industry.

Focus group methodology has limitations. With the smaller sample size of the focus groups and their on-site location, results should not be extrapolated from this study. The ethnic diversity of the state of Iowa is not comparable to states with larger Latino populations, therefore the results conducted from studies in other states may provide a different view.

In our study, participants seemed hesitant to discuss negative aspects of their jobs. This characteristic of the responses could suggest that participants feared that negative responses to questions might result in job termination or other negative results. Members of underrepresented groups, such as Latinos, may feel uncertain about sharing negative aspects because they could be intimidated by the status of a researcher (Umaña-Taylor and Bámaca, 2004). In addition, it was acknowledged that on-site focus groups may dampen participants' willingness to speak openly; however, earlier attempts to recruit Latinos to meet elsewhere had not succeeded. We also purposefully were sensitive to immigration issues and did not ask questions about immigration status, which might be considered threatening. However, focus group participants did share concerns and problems, which indicated that the on-site location of the sessions did not entirely cause members to self-censure, and increased our confidence in the quality of the findings. The large number of diverse suggestions was another indicator to us that the on-site location of the focus groups did not severely hamper authentic idea-generation.

Researchers utilizing focus group methodology may want to consider adaptations for Latino audiences. Because Latino participants tend to feel more comfortable sharing information with people they know, researchers may want to consider planning a pre-visit with potential participants. A pre-visit may result in participants being more forthcoming in answering questions and giving suggestions for educational programming. In addition, a pre-visit also would help participants better understand the purpose of the study.

Our findings are similar to research with Latino workers working in arboriculture in Connecticut (Ricard et al., 2008). Face-to-face interviews were arranged with the Latino workers through the employer to obtain detailed worker information. Participants in the face-to-face interviews indicated they were interested in learning about United States culture, English language, and plant cultivation. Respondents of the study conducted by Ricard et al. (2008) also indicated they preferred receiving educational assistance at their place of employment and cited transportation as an obstacle to attending educational classes outside of work.

Our focus group discussions showed that Latino employees gained some horticultural knowledge from on-the-job training. These findings are similar to Mathers (2003), who showed that Latino workers received horticultural information from on-the-job training and from bilingual supervisors. Respondents to the survey conducted by Mathers (2003) indicated that plant identification and pest control were educational topics Latino workers were most interested in learning. Our research also showed that Latino workers lacked horticultural knowledge and were interested in educational materials to increase their knowledge in this area. Mathers (2003) also found in Oregon that respondents had

considerable grasp of English. Our research indicated that most participants did not speak fluent English, and they were interested in taking English classes.

Results from focus group discussions suggest that cooperative extension, community agencies, and horticultural firms could develop programs addressing language and training issues (Table 1). University extension programs and educational services could use this information to develop publications or workshops tailored to Spanish-speaking Latino workers. Providing publications that explain horticultural tasks such as how to install plants, prune a tree, or mow greens, classes in Spanish about growing requirements of landscape plants, and effective use of fertilizers and pesticides would help Latino employees improve their job performance. In addition, existing extension publications could be translated from English to Spanish for distribution among Latino workers.

Focus group participants also listed recommendations for managers of Latino workers in the Iowa horticultural industry. Managers of horticultural firms who hire Latino workers should consider subscribing to green industry magazines written in Spanish to help employees further their knowledge. Managers also may want to provide more educational opportunities to Latino workers to learn about basic horticultural jobs and tasks, such as landscape and golf course maintenance. Our focus group discussions also suggested that managers would benefit from learning and using Spanish vocabulary specific to the golf course, production nursery, and landscape installation. The way in which participants talked about the two-way language learning opportunity also suggested that Latino workers viewed the issue from the point of view of respect and relationship building. For managers to learn and use Spanish in the horticultural industry would seem to go a long way toward building high quality working relationships. These findings are similar to our previous study with

managers of Latino workers that showed that Latino employees also valued positive interpersonal relationships with their supervisors (Justen et al., 2009).

If implemented, the suggestions of focus group participants for future programming could improve communication between managers and Latino employees, and job performance of Latino employees. Past research involving the horticultural workforce supports the need for educational programming for horticultural industry workers (Bitsch and Harsh, 2004; Haynes et al., 2007; Mathers, 2003; Scoggins et al., 2004).

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Table 1. Recommendations for future educational programming for cooperative extension/ community agencies and horticultural firms to assist Latino workers in the horticultural industry. Recommendations originated from focus group participants who were Spanish-speaking employees in the Iowa horticultural industry.

Cooperative extension/community agencies
• Publications that explain implementation of horticultural tasks
• Classes in Spanish about watering, fertilizing, and chemical application
• Classes in Spanish to learn about plants, their names, and growing requirements
• Provide child care to encourage more people to attend
• Delivery of educational materials in Spanish should be explicit and applied
• Flyers/bulletins in Spanish that explain extension classes posted at grocery stores, community centers, and churches with services in Spanish
• Make resources easily accessible and available in Spanish
• Work with companies to send employees to classes
• Publications about Latin American culture and customs for supervisors of Latino workers
Horticultural firms
• Work with extension to support and send employees to classes
• Provide magazines in Spanish about landscaping or other relevant work material
• Use pictures instead of words to organize tools
• Encourage people who supervise Latino workers to learn basic Spanish phrases/words

- Provide opportunities for both supervisors and employees to learn how to better manage and work with people

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CHAPTER 5. GENERAL CONCLUSIONS

General Discussion

This study examined what barriers managers and Latino workers in the Iowa horticultural industry perceived, and what educational programs could be developed to help managers and Latino workers improve working relationships and workplace knowledge. The two studies had similar conclusions. Results indicate that both managers and Latino employees experience difficulties communicating to each other in their non-native languages. Managers and Latino employees recognized cultural differences and made suggestions for publications and classes that could improve understanding between the two groups. Both groups also suggested that managers and employees could benefit from personnel management classes.

The two studies also had different conclusions. Most managers were familiar with university extension programs but felt that these programs should be promoted better. Only one Latino employee was familiar with university extension. Managers were interested in websites and links from extension or associations that had information about cultural differences. Latino employees were interested in classes delivered face-to-face, but were concerned that other time commitments would prohibit them from attending. Extension programming could use this information to offer classes on weekends when Latino participants may have more time to attend. Extension could also work with horticultural companies to offer classes during work hours, or offer bilingual workshops during annual association meetings.

Data from this research were collected in the form of focus group discussions. Focus groups have been shown to be useful for illuminating sensitive topics, such as manager-employee relationships (Morgan, 1998). The researchers also found focus groups successful in generating opinions and ideas. The focus group questions were sequenced to introduce the participants to the topic, and as they became more comfortable with the format they were prepared to answer more complex questions. In addition, researchers or educators can transfer the results to areas outside the field of horticulture and use the information from our study to conduct similar research or develop educational programs.

Focus group methodology also has limitations. Bias may be created if the moderators ask leading questions, or one focus group participant dominates the discussion. In addition, focus group sample sizes are generally small and may not be representative of a population. The researchers worked hard not to dominate discussions while still probing for more information on relevant topics.

Our focus group results showed that Latino employees were interested in classes delivered face-to-face. These results indicate that Latino employees may struggle with literacy, both Spanish and English. Literature about education and literacy levels of Latino agricultural workers show that Latino workers' average highest completed grade is 7^{th}, with 97% completed in their home country (U.S. Department of Labor, 2005). Umaña-Taylor and Bámaca (2004) also found estimates of low levels of formal education and low rates of high school completion among Spanish-speaking immigrants to the United States, which suggest that low literacy may be a concern. The potential for Latino participants to have a lower literacy level was a factor leading us to choose focus groups to gather data. We did not feel the lower literacy levels kept the Latino employees from understanding and answering the

questions in our study. Instead, we felt the collectivist nature of focus groups encouraged more participation than a similar study would have produced with written surveys. In addition, the researchers shared their own experiences to build trust with and to help Latino participants feel more comfortable talking about their work relationships with their managers,

To test our questions, we conducted a pilot study with a representative group of Latino workers. The pilot study was held at a production nursery in Minnesota in June 2007, after Institutional Review Board approval and before recruitment letters were sent to managers. During the pilot study, we asked Latino employees if the questions we were proposing to ask were understandable and if the objective of the study was clear. We also asked for input about how to best recruit Latino employees to participate in the future focus groups. The pilot study participants recommended meeting with potential participants in person, and making the purpose of the study very clear. The pilot study helped us become more confident that not only would people willingly participate, but also that our questions were clear and inoffensive.

Future Research

Our research revealed limitations to the focus group format with respect to recruitment. To recruit Latino workers, we relied on managers who already participated in previous focus groups and we did not have an available list of Latino employees. A survey designed for managers and distributed prior to recruiting for the focus groups may have resulted in a larger sample. In addition, conducting pre-visits with participants may increase the level of comfort with the moderators and thereby cause participants to be more forthcoming in describing negative aspects of their jobs. While Latino participants did

discuss some negative aspects of their jobs, the researchers felt they "held back." Members of underrepresented groups, such as Latinos, may feel uncertain about sharing negative aspects because they could be intimidated by the status of a researcher (Umaña-Taylor and Bámaca, 2004). To alleviate potential feelings of intimidation, researchers can create a comfortable setting in which the participants are the experts and the researchers are learning from them; this setting also can lead to participants believing their experiences are valid and worth sharing (Umaña-Taylor and Bámaca, 2004).

This research, however, is just the beginning aimed at developing better communication and efficiency with a growing Latino workforce. Further studies directed at the horticultural workforce are recommended. A statewide survey using Iowa Nursery and Landscape Association and Iowa Turfgrass Institute active member lists, in addition to any other lists of horticultural firms in the state of Iowa, would help researchers identify relevant populations to answer other questions. Questions for managers might include perceptions of clients toward Latino workers, educational level, and years as a manager. Additional questions for Latino workers might include educational level, age, and if they have computer access. Answers to these and other questions from larger populations would further enrich our understanding of the horticultural workforce and inform the development and delivery of educational materials.

Extension program assessment and evaluation are another area for future research. Assessment is necessary for a variety of educational materials. For example, existing publications, videos, and internet based educational materials could be assessed and evaluated for availability and accessibility. This could help university extension target specific audiences for existing programs and educational materials. A statewide survey of

county extension agents, county offices, and regional offices is recommended to determine how much need extension educators have for programs and materials in Spanish. The statewide survey could include questions about demand for Spanish publications and classes, and what educational topics Spanish-speaking clients seek. Finally, assessing how extension and other agencies market their educational services and programs to reach the target audience would be another area for research.

In the course of our research, we found resources available to employers and employees working in the horticultural industry. The Occupational Safety and Health Administration (OSHA) provides publications in Spanish, including cards, fact sheets, news releases, posters, and safety and health information bulletins. Books, CDs, and videos that help people learn horticultural terms in Spanish and English are available from university or cooperative extension services (Thomas, 2003; University of Illinois Extension). However, these materials require access to the internet and a credit card, and may not be easily accessible for Latino workers.

The research conducted for this thesis has been instrumental in laying groundwork for future research. For Latinos employed in the horticultural industry in the state of Iowa, this research has begun the process of establishing communication and trust with the Latino community. In addition, it has strengthened the network between Iowa State University and industry professionals. Further needs assessments and implementation of suggestions could improve communication between managers and Latino employees.

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APPENDIX

Recruitment Letter

Question Guide

Reminder Postcard

Recruitment Letter

English Version

Dear Manager,

We have a unique opportunity for you to share your perceptions about Spanish-speaking employees and we need your help. Dr. Cynthia Haynes of the Department of Horticulture at Iowa State University and I would like to request your participation in my Master's thesis research study. The purpose of this study is to learn about the needs of managers and Spanish-speaking employees of the Iowa horticulture industry. You are being invited to participate in this study because you have been identified as a manager or owner of a nursery, greenhouse, landscape company, or golf course, or are a member of the Iowa Nursery and Landscape Association or Iowa Turfgrass Institute. If you agree to participate in this study, you will be invited to a focus group session lasting 2-3 hours. During the focus group we will ask for and record your input on several questions about Spanish-speaking workers in your employ. All responses will be confidential and combined with others for use in statistical analysis. No individual data will be reported. It is hoped that the information gained in this study will benefit society by aiding recruitment and retention of Spanish-speaking workers in the horticulture industry of Iowa.

Your participation in this study is voluntary at all times. Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. To ensure confidentiality, names will be changed during transcription and data analysis. If the results are published, your identity will remain confidential. We will provide a light meal or snack for those who participate.

Please contact us as soon as possible to participate or with further questions. We can be reached by email or phone: Emilie Justen at (515) 294-2503, email eajusten@iastate.edu, or Dr. Cynthia Haynes at (515) 294-4006, email chaynes@iastate.edu.

Sincerely,

Emilie Justen
Graduate Student
Department of Horticulture

Cynthia Haynes
Associate Professor
Department of Horticulture

Recruitment Letter

Spanish Version

Estimado Señor,

Tenemos una oportunidad única para que usted comparta sus opiniones sobre su trabajo y necesitamos su ayuda. Dr. Cynthia Haynes del Departamento de Horticultura a Iowa State University y yo quisiéramos solicitar su participación en el estudio de la investigación de la tesis de una maestería. El propósito de este estudio es para aprender sobre las necesidades de los supervisores y los empleados de la industria de la horticultura de Iowa. Le estamos pidiendo participar en este estudio porque le hemos identificado como empleado de un vivero, invernadero, o curso de golf. Si usted acuerda de participar en este estudio, su participación estará en un grupo de discusión para 2-3 horas. Durante el estudio pediremos y registraremos su entrada en varias preguntas de su trabajo. Usted seguirá siendo anónimo a traves del proceso. Se espera que la informacion ganada en este estudio beneficiara a sociedad ayudando al reclutamiento y a la retención de trabajadores estacionales en la industria horticultura de Iowa.

Su participación es voluntaria siempre. Proporcionaremos una comida o bocado para los que participan. Los registros que identifican a participantes serán mantiendo confidencial hasta el punto permitido por leyes y regulaciones aplicables y no serán hecho públicamente disponible. Para asegurar confidencialidad, nombres se cambiaran durante el análisis de transcripción y datos. Si los resultados se publican, su identidad se quedará confidencial.

Por favor entrenos en contacto para participar o con otras preguntas. Usted puede llamar o mandar por email Emilie Justen, teléfono (515) 294-2503, email eajusten@iastate.edu. Gracias por su tiempo.

Sinceramente,

Emilie Justen
Estudiante Graduado
Departmento de Horticultura
Iowa State University

Question Guide

English Version for Managers

1. How did you become involved in horticulture?
2. What is your agriculture history or background?
3. What dreams or aspirations do you have for the future?
4. What position do you hold in your company?
5. What are your duties in this position?
6. What do you enjoy about your position?
7. What do you dislike about your position?
8. How much Spanish do you speak?
9. What training and information resources are available to you?
10. What training and information resources do you provide to your Spanish-speaking employees?
11. How do you access these resources?
12. Do you know about the Extension Service and Extension programs?
13. How can Extension help make you more successful with Spanish-speaking employees?
14. How much contact do you have with your employees outside of work?

Question Guide

Spanish Version for Latino Employees

1. ¿Cómo empezó trabajar en la horticultura?
2. ¿Tiene usted experiencia con jardines o huertos?
3. ¿Qué es su historia agricola?
4. ¿Qué aspiraciones tiene usted para el futuro?
5. ¿Qué posición tiene usted en su compañía?
6. ¿Qué son sus tareas en esta posicion?
7. ¿Tiene una posicion estacional?
8. ¿Qué le gusta más de su posicion?
9. ¿Qué son sus frustraciones de su posicion?
10. ¿Habla usted mucho Inglés?
11. ¿Qué entrenamiento y información recursos están disponibles para usted?
12. ¿Cómo consigue acceso a estos recursos?
13. ¿Está usted enterado de Extensión y de programas de Extensión?
14. ¿Cómo puede Extensión ayudarle tener más éxito en su trabajo?

Reminder Postcard

We could use your help!

If you employ or supervise Spanish-speaking workers, we want to hear from you. We would like to learn more about the needs of managers and Spanish-speaking employees in the Iowa horticulture industry.

Please contact Emilie Justen by phone 515-294-2503, email eajusten@iastate.edu, or Dr. Cindy Haynes by phone 515-294-4006, email chaynes@iastate.edu to participate in one of our focus groups or if you have any questions.

Sincerely,

Emilie Justen and Cindy Haynes
Department of Horticulture, Iowa State University